



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,360	08/11/2005	Michel Maquaire	122090	2979
25944 7590 05/13/2008 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER				
RIVELL, JOHN A				
ART UNIT		PAPER NUMBER		
3753				
MAIL DATE		DELIVERY MODE		
05/13/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/519,360

## Applicant(s)

MAQUAIRE ET AL.

## Examiner

JOHN RIVELL

## Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 4/29/08 (RCE).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 29, 2008 has been entered.

Claims 10 and 11 have been canceled. New claim 12 has been added. thus claims 1-9 and 12 are pending.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5, 6, 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dischler (U. S. Pat. No. 6,345,649) in view of Dank (U. S. Pat. No. 2,370,451).

The patent to Dischler discloses, in figures 7 and 9, two separate embodiments each of which include for example, a "single valve, comprising: a seat (read at the surface of port 150 in fig. 7 or at the diaphragm facing surface of port 250 of fig. 10) with

an opening (150 or 250); and a semi-rigid membrane (bi-stable element 144 or 244) with one or several openings (one opening at 148 in each embodiment) and which is structured to successively adopt two stable positions (e.g. open or closed), wherein the one or several openings (150 or 250) are disposed around a central part of the membrane (144, 244; the one opening 150 or 250 is disposed on a circle whose center is at the central axis of the opening 148); wherein the central portion of the membrane (144 of fig. 7) sits against the seat to close the opening (148) in the seat... wherein, in a first stable position, a surface of the central part of the membrane (144 or 244) sits against the seat to close the opening" as recited in claim 1.

Thus the patent to Dischler discloses all the claimed limitations with the exception of having "the central part of the membrane (144 or 244 have) a thickness... substantially the same" as the thickness of the remainder of the membrane.

The patent to Dank discloses, in the embodiment of figure 5 for example, that it is known in the art to employ a single membrane type fluid pressure responsive flexible valve element at valve proper 26', which includes plural openings 30 "disposed around a central part of the membrane", which membrane seats against an opening at the bottom end of passage 20 to close off the opening, and which membrane is of uniform thickness across the span of the diaphragm for the purpose of providing a uniform thickness valve element that does not require additional manufacture and/or weight as opposed to the membrane of Dischler which would include additional manufacture to form the extension at 162 or the unreferenced element that seats of figure 9.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Dischler a uniform thickness membrane element for the purpose of providing a uniform thickness valve element that does not require additional manufacture and/or weight as recognized by Dank.

Regarding claim 2, in Dischler "the seat (at ports 150 or 250) and the membrane (144 or 244) are assembled such that the membrane in a first stable position prevents a circulation of fluid (see fig. 8, closed) and in a second stable position allows the circulation of fluid (figs. 7 and 9, open)" as recited.

Regarding claim 3, in Dischler, "the membrane (144 or 244) is open so as to create a difference in pressure on either side of the single valve during the circulation of fluid". That is, when the valve 102 or 202 is open, the port 150 or 250 permits the creation of a difference in pressure across the membrane 144 or 244.

Regarding claim 4, in Dischler, "the single valve (144 or 244) is activated by the difference in pressure upstream and downstream of the single valve" as recited.

Regarding claim 5, in Dischler, "the membrane (144 or 244) is made of a polymer" as it is manufactured by molding.

Regarding claim 8, the recitation "An inflation and deflation valve" is considered nothing more than a name given the claimed device. As such it carries no patentable weight and the device of Dischler is thus considered to be a similar "inflation and deflation valve comprising the single valve according to claim 1" as recited. Additionally, in the event the recitation does in fact carry patentable weight, the patent to Dank disclosed the valve element therein controlling inflation and deflation of a tire.

Regarding claim 9, in Dischler, "the seat (at the port 150 or 250) is of revolution and incorporates at its center an opening (150 or 250)" as recited.

Regarding claim 12, as taught at the plural openings 30 of Dank, provided for the purpose of allowing equal flow about the valve it would have been obvious to one having ordinary skill in the art to employ a plurality of openings in the membrane of Dischler.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dischler in view of Dank, as applied to claims 1-6, 8, 9 and 12 above, further in view of Rieckhoff (U. S. Pat. No. 5,855,221).

The patent to Dischler, as modified by Dank, discloses all the claimed features with the exception of having the valve element "made by stamping a metal sheet".

The patent to Rieckhoff discloses that it is known in the art to employ a perforated metallic dome at 26, functioning as the actuator of a valve element that is maintained in "two stable positions" by the snap action of the metallic dome for the purpose of maintaining the valve element in its opposite extreme positions of actuation utilizing a snap acting actuator of metallic material that is capable of withstanding environmental conditions that a polymer element would otherwise not be able to withstand. Clearly the metallic dome element 26 of Rieckhoff "made by stamping a metal sheet".

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Dischler, as modified by Dank, a metallic element, in place of the polymer material of element 42 for the purpose of maintaining the valve element in its opposite extreme positions of actuation utilizing a snap acting actuator of metallic material that is capable of withstanding environmental conditions that a polymer element would otherwise not be able to withstand as recognized by Rieckhoff. Clearly, such a metallic dome element can be "made by stamping a metal sheet".

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dischler in view of Dank, as applied to claims 1-6, 8, 9 and 12 above, further in view of Frye (U. S. Pat. No. 3,084,707).

The patent to Dischler, as modified by Dank, discloses all the claimed features with the exception of having "the membrane... made by duplicate molding an elastomer onto a metallic core grid".

The patent to Frye discloses that it is known in the art to employ an elastomeric diaphragm element 22 containing a reinforcing metallic element 32 for the purpose of reinforcing the otherwise polymeric valve diaphragm 22.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Dischler, as modified by Dank, a metallic element embedded within the polymeric element 42 for the purpose of reinforcing the polymeric valve diaphragm 42 as recognized by Frye. Clearly the resultant embodiment can be "made by duplicate molding an elastomer onto a metallic core grid" as recited.

Further, concerning claims 6-7 applicants attention is directed to M.P.E.P. §2113 which specifically discusses, in pertinent part:

***2113 Product-by-Process Claims [R-1]***

**PRODUCT-BY-PROCESS CLAIMS ARE NOT LIMITED TO THE MANIPULATIONS OF THE RECITED STEPS, ONLY THE STRUCTURE IMPLIED BY THE STEPS**

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted) (Claim was directed to a novolac color developer. The process of making the developer was allowed. The difference between the inventive process and the prior art was the addition of metal oxide and carboxylic acid as separate ingredients instead of adding the more expensive pre-reacted metal carboxylate. The product-by-process claim was rejected because the end product, in both the prior art and the allowed process, ends up containing metal carboxylate. The fact that the metal carboxylate

Art Unit: 3753

is not directly added, but is instead produced in-situ does not change the end product.).

>The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., *In re Gamero*, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979) (holding "interbonded by interfusion" to limit structure of the claimed composite and noting that terms such as "welded," "intermixed," "ground in place," "press fitted," and "etched" are capable of construction as structural limitations.)<

Thus applicant should be aware that the patentability of claims 6-7 rests on distinguishing structural elements claimed and not the method of manufacture.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN RIVELL whose telephone number is (571)272-4918. The examiner can normally be reached on Mon.-Fri. from 6:00am-2:30pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/John Rivell/  
John Rivell  
Primary Examiner  
Art Unit 3753**

j.r.